

**REMARKS/ARGUMENTS**

In response to the Office Action mailed August 6, 2008, Applicants request reconsideration of the rejections in light of the foregoing amendments to the claims and the following remarks. A three month request for extension of time to respond is attached hereto.

Support for the amendments to claims 1 and 7 may be found in the last paragraph of page 3 over to page 4 of the specification as filed.

Claims 1-11 stand rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention in claims 1-3, 5 and 7. The Examiner contends that the terms "high pressure" and "narrow bore" are relative terms and it is unclear what must be included or excluded from the claims.

Applicants have deleted the phrase "high pressure narrow bore" from claims 1-3, 5 and 7 and contend that this amendment results in a claim that particularly points out the invention that they are claiming. Reconsideration and reversal of this rejection are respectfully requested.

Claims 1 and 5-11 stand rejected under 35 USC §103(a) as being unpatentable over Tiep et al. (4,535,767) and further in view of Lecourt (6,592,848).

The Examiner contends that Tiep discloses a nasal cannula that can be used for delivering a breathable gas mixture comprising helium and oxygen to a patient, the nasal cannula comprising a length of high pressure narrow bore tubing having a proximal end region that can be used for connecting to a high pressure source of the breathable gas mixture at a pressure in the range of 100 bar to 300

bar and a distal end region connected to at least one nasal administration device, wherein the nasal administration device has at least one orifice that can be used for the expansion of the breathable gas mixture.

Although Tiep discloses a nasal cannula that is capable of performing the intended use of the apparatus claimed, Tiep lacks the specific teaching of the gases and pressure as claimed.

Lecourt teaches that it is well known to combine helium and oxygen gases together for the treatment of respiratory disorders and teaches that these gases may be packaged between 2 and 300 bar.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the nasal cannula disclosed by Tiep to deliver the gases taught by Lecourt in order to treat the respiratory system of patients with an easy to use nasal cannula.

Regarding claim 7, Tiep discloses an apparatus that can be used for administering a breathable gas mixture of helium and oxygen and discloses a supply tank as a means for supplying breathable gas at a high pressure and a nasal cannula with a length of high pressure narrow bore tubing having a proximal end region which can be used for connecting a high pressure source of the breathable gas mixture at a pressure in the range of 100 bar to 300 bar and a distal end region connected to at least one orifice that can be used for the expansion of the breathable gas mixture.

Although Tiep discloses a nasal cannula that is capable of performing the intended use of the apparatus claimed, Tiep lacks the specific teaching of the gases and pressure as claimed.

Lecourt teaches that it is well known to combine helium and oxygen gases together for the treatment of respiratory disorders and teaches that these gases may be packaged between 2 and 300 bar.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the nasal cannula disclosed by Tiep to deliver the gases taught by Lecourt in order to treat the respiratory system of patients with an easy to use nasal cannula.

Applicants contend that the invention as claimed is not obvious over the combination of Tiep and Lecourt. Applicants claim a nasal cannula for delivering a breathable gas mixture comprising helium and oxygen to a patient, the nasal cannula comprising a length of tubing having a proximal end region for connection to a high pressure source of the pressure breathable gas mixture at a pressure in the range of 100 bar to 300 bar and a distal end region connected to at least one nasal administration device comprising a nasal prong or pair of nasal prongs formed with a plurality of perforations, wherein the nasal administration device or the distal end region of the tubing has at least one orifice for the expansion of the breathable gas mixture.

They also claim an apparatus for administering a breathable gas mixture comprising helium and oxygen including means for supplying the breathable gas mixture at a high pressure and a nasal cannula comprising a length of tubing having a proximal end region for connection to a high pressure source of the breathable gas mixture at a pressure in the range of 100 bar to 300 bar and a distal end region connected to at least one nasal administration device comprising a nasal prong or pair of nasal prongs formed with a plurality of perforations, wherein the nasal administration device or the distal end region of

the tubing has at least one orifice for the expansion of the breathable gas mixture.

Tiep in Fig. 4 shows the cannula 32 to be a smooth bore that is placed in the nostrils of a patient. Applicants invention utilizes a nasal prong or pair of nasal prongs formed with a plurality of perforations as noted in Fig. 3, number 22. This will assist in delivering the expanded gas that is at approximately atmospheric pressure to the patient.

Lecourt teaches a binary gaseous mixture of helium and oxygen and its use in treating respiratory situations. Lecourt however does not teach a device which can be used to direct the gaseous mixture into the nostrils of a patient.

Applicants contend that this combination of references does not teach their invention. The use of a plurality of perforations in the nasal prong or prongs is not taught in Tiep. This provides more efficient delivery of a gas or gas mixture regardless of whether it is oxygen and helium or not. Based on the smooth bore taught in Tiep there is no indication that gases that are useful in Tiep would be useful or effective in Applicant's nasal cannula. Applicants would not then look to Lecourt to use the taught gas mixture in the process of Tiep and arrive at their invention. Reconsideration and reversal of this rejection are respectfully requested.

Claim 2 stands rejected under 35 USC §103(a) as being unpatentable over Tiep in view of Lecourt and further in view of Smart (4,685,456).

The Examiner contends that Smart teaches a self-retracting coiled tube for the deliver of gas to a patients.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have substituted the gas delivery tube of Tiep with a self retracting coiled tube as taught by Smart in order to obtain a nasal cannula with a tube that can be easily expanded and contracted to accommodate a patient's movement.

In claim 2, Applicants claim that the tubing is coiled. The reason that the tubing is coiled is to assist in managing the flow of the gas mixtures. As Applicants have contended above, the combination of Tiep and Lecourt do not suggest the invention of claims 1 and 5-11. The design of Applicants' nasal cannula is different from the smooth bore design of Tiep and the suggested use of the oxygen and helium mixture does not derive motivation from the combination of Tiep and Lecourt. Given the lack of teaching in this combination, Applicants would not look to a reference which teaches that a coiled hose can be used to limit snagging or getting caught in doors and equipment for their coiled hose. The purposes of the coiling is quite different and this combination of three references does not teach the invention of claim 2. Reconsideration and reversal of this rejection are respectfully requested.

The references made of record and not cited have not been discussed as they are considered less relevant than those relied upon.

For these reasons Applicants submit that their claims define patentable subject matter and are in condition for allowance. Prompt favorable action to that end is respectfully requested. The Examiner is invited to call the undersigned should any question arise during the reconsideration of the subject application.

Appl. No. 10/543,025  
Amdt. dated February 4, 2009  
Reply to Office Action of August 6, 2008

Respectfully submitted,

Correspondence Information  
Customer Number: 20411  
Phone 908-771-6402  
Fax: 908-771-6159

/Philip H. Von Neida/  
Philip H. Von Neida  
Registration No. 34,942  
Attorney for Applicants  
Date: February 4, 2009